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(54) Title: A PROSTHESIS DEVICE FOR HUMAN ARTICULATIONS, IN PARTICULAR FOR THE ANKLE ARTICULATION

(57) Abstract

A prosthesis device (1) for correctly replacing of the articular surfaces of the human ankle joint comprises: a first component (2) having a spherical convex articular bearing surface (5); a second component (3) having a bearing surface (6) which has a convex shape in the frontal plane, and concave sulcus in the frontal plane; and a third component (4) located between said first and second components (2, 3) and having two surfaces (7, 8) which are complementary to and engage the upper convex and the lower concave sulcus surfaces (5, 6) to be fully congruent with the components (2, 3). The three components (2, 3, 4) can be designed from the subject-specific geometry of the ligaments (9, 10). The device (1) can move under natural muscular and ligamentous control, closely restoring that of a natural joint and maintaining uniform load distribution. A prosthesis device (1) implanted according to a stated method of ensuring equal dorsi- and plantar-flexion gaps between first (2) and second (3) components, is a part of the invention.

